

SUPPLEMENT.

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1476.—Vol. XXXIII.]

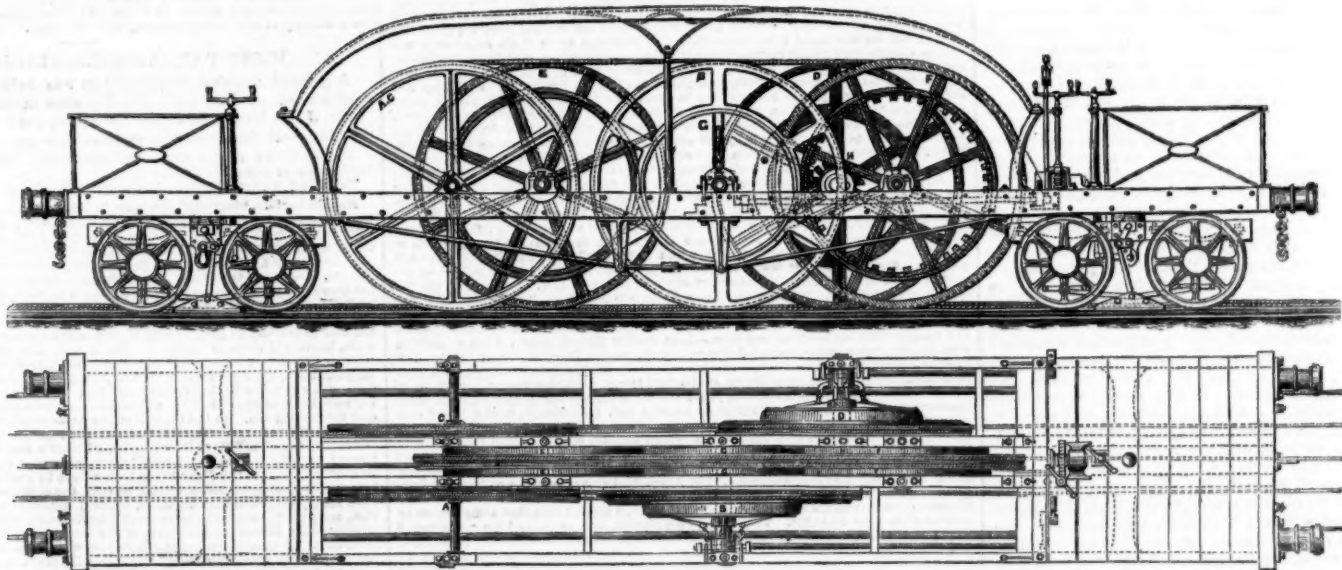
LONDON, SATURDAY, DECEMBER 5, 1863.

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JOURNAL] UNSTAMPED, FIVEPENCE.

TRACTION ON VERY STEEP RAILWAY GRADIENTS.

DESCRIPTION OF AGUDIO'S FUNICULAR LOCOMOTOR, WITH DOUBLE-ACTION DIFFERENTIAL PULLEYS.

(Scale 5 feet to an inch.)



THEORY.—This new system of locomotion is based upon the principle of the pulley and blocks, by which very heavy weights can be raised by relatively small ropes. Up to the present time trains have always been drawn up inclined planes by attaching them directly to the motor rope, without having ever thought of turning to account a combination of pulleys, as is used in a thousand instances in all kinds of machinery. Nowhere, however, could pulleys be more advantageously adopted than on inclined planes, where immense power has to be exerted, and at a considerable distance from the resistance.

THE FUNICULAR PRINCIPLE APPLIED TO AN INCLINED PLANE.—Previous to describing that part of the machinery which is based on the principle of the pulley and blocks, it is as well to give a general sketch of the arrangement of the locomotor as applied to an inclined plane, as it differs in many respects from that employed at Liège. Instead of having only one stationary engine, placed at the summit of the inclined plane for the traction of the ascending portion of the endless rope to which the train is attached, there are two stationary engines, one at each end of the inclined plane, respectively drawing the two ends of the rope with equal power in contrary directions. The rope is placed entirely between the rails, and is kept constantly stretched by two tension wagons fastened to its extremities. Motion is given to it by two systems of motor pulleys, put in rotation by the stationary engines, and acting upon the rope by simple adhesion, as in the ordinary method.

FUNICULAR LOCOMOTOR.—The motion of the endless rope drawn by the stationary engines is communicated to a wagon which contains the pulleys, and which we will call the funicular locomotor. This locomotor consists of a long articulated frame, on the American principle, furnished with a combination of pulleys and drums, the object of which is to produce a difference of speed between the motion of the rope and that of train. For this purpose the ascending portion of the motor rope is wound twice round the pulleys, A B, while the descending portion is wound twice round the descending portion, C D. The pulleys, A and C, being loose on their axles, play no part in the locomotion, but are simply intended to guide the rope on to the other pulleys, B and D, by which the motion is transmitted to the train. E and F are two drums, to which are transmitted the motion of the pulleys, B and D. For this purpose the pulley, B, is made to revolve concentrically with a wheel, G, placed in the centre of the locomotor, and pressing tightly against the surfaces of the drums, E F, so as to communicate to them by friction the rotatory motion it receives from the pulley, B. The motion imparted to the pulley, D, by the descending portion of the rope is only transmitted to one of the drums, F, by a pinion, G, working on teeth placed in the inner perimeter of F. By this arrangement two stationary engines, placed at the opposite ends of the inclined plane, set the wagon in motion, through the medium of the drums, E F. A single wire-rope, which we shall call the adhesion rope, is laid down in the centre of the rails for the entire length of the inclined plane. It is fixed very firmly at the summit, and kept stretched below by a counterpoise of considerable weight. As this rope passes twice round either of the drums, E F, the latter, during their rotation produced by the pulleys, B D, grasp the successive portions of the rope by means of the adhesion of the surfaces in contact, which sets the locomotor in motion precisely as an ordinary locomotive is propelled by the revolution of the driving-wheels on the rails.

THEORY OF THE LOCOMOTOR.—It will be at once apparent, on consideration of the foregoing remarks, that there is a vast difference between the velocity of the rope and that of the locomotor. The movement of the rope does not only depend upon the speed of the wagon, but upon its revolution round the pulleys, so the speed at which the rope travels is greater than that of the train, being equal to the sum of the velocities of the train and the development of the rope on the pulleys, both having a parallel motion in the same direction.

Let us suppose the speed of the wagon to be a , that of the rope to be v , and the development of the rope round the pulleys, s ; the speed of the rope at a given point will be expressed by the following equation:— $v = a + s$; whence $s = v - a$, that is to say, the speed of development of the ascending portion of the rope round the pulleys, or its speed tangential to the pulley, B, is equal to the absolute speed at which the rope travels, minus that of the train. The tangential speed of the pulley, D, is different; and, as the train proceeds in a contrary direction to the descending portion of the rope, consequently the speed of the descending portion of the rope,

tangential to the pulley, D, is equal to the sum of the velocities of rope and the train, which gives us— $s = v + a$. The tangential speed of the rope is, therefore, equal to the sum of the velocities of the rope and the train in the pulley, D, and to their difference in the pulley, B.

APPLICATION OF THIS THEORY TO THE CONSTRUCTION OF THE LOCOMOTOR.—The adhesion rope which presses round the two pulleys, E F, produces in each them a very powerful traction, which would constantly tend to approximate their axles, but for the intermediate friction-wheel, G, placed on the axle of the motor pulley, B, and which eliminates the pressure the adhesion rope would cause on the drums, while it produces the adhesion necessary for the transmission of the power from the pulley, B, to the drums, E F. We shall soon see the advantage obtained by transmitting motion indirectly by friction, instead of directly, as might have been easily done by fixing the pulley, B, on the axle of one of the drums. The relative diameter of the friction-wheel, G, and the pulleys is such that the tangential speed of the rope to the latter—in other words, the velocity of the train being taken as unity, that of the pulley, B—the speed of the development of the rope would be $\frac{1}{2}$, from which we obtain— $v = a + s = 1.25 = 2.25$ so that the speed of the motor rope is two and a quarter times that of the train. The speed of the descending portion of the rope is— $s = v + a = 2.25 + 1 = 3.25$. The pinion, G, working on the inner perimeter of the drum, F, permits of utilising the motion of the descending portion of the rope. This combination of drums and pulleys, which may be called double-action differential pulleys, and in which all crossing of the ropes has been avoided, has, therefore, the signal advantage of turning to account for the first time the action of the descending portion of the rope. The total power to be exerted is equally divided between the two halves of the rope; and, as its speed is $\frac{1}{2}$ times that of the train, the resistance or tension of the rope is not only reduced one-half by such division, but of this half there only remains less than a quarter of the tension which would have been exerted by attaching the train directly to the rope. The tension being so considerably diminished, the section and weight of the rope are likewise diminished, and the passive resistance caused by the weight and rigidity of the rope is also much diminished along the whole length of the inclined plane. This will permit of giving very great extent and steep gradients to inclined planes, as well as of adopting curves. The loss of power, owing to the resistance of the locomotor, is largely compensated for by the diminution of the passive resistance arising from the rope.

STARTING AND STOPPING THE LOCOMOTOR.—Having enunciated the theory upon which the locomotor is based, we will succinctly explain how it is put in motion and stopped. This is all the more necessary, as the enormous inertia to be overcome in order to start a train on an inclined plane might seem to be an insurmountable obstacle to those who have not formed a clear notion of the action of the motor rope by this new principle. All difficulty immediately disappears when we know that the motor pulleys, B D, can work either fast or loose on their axles, which permits of both rope and motor pulleys obtaining a certain velocity previous to locking the latter solidly on their axles, by means of levers. The motion, or *vis viva*, of the four pulleys, A, B, C, D, will be thus gradually transferred to the drums, which will revolve by friction against the adhesion rope, and overcome the inertia of the train, without the motor rope having relaxed its speed, or having had to bear a hurtful strain. In order to avoid as far as possible any shock to the locomotor, the pulley, B, alone is put in gear, so as to transmit its motion to the drums by simple friction, through the wheel, G. By putting the pulleys out of gear, the wagon can be easily stopped, provided the driver immediately uses either the brake attached to one of the drums, or that destined to clench the rails. These brakes also serve to diminish the velocity of the train in descending the inclined plane, and in this case the motor rope will not move, and all the pulleys of the locomotor will work loose on their axles. Köchlin's gear, which is employed for fixing the pulleys, B D, on their axles, can also be employed as a brake; it acts by friction on the motor pulleys, and serves to diminish their speed. Whatever, then, be the gradient on mountain railways, within certain limits, there will always be complete security, even should all the ropes break; since the locomotor itself contains a complete system of brakes, capable of rapidly absorbing an immense amount of momentum acquired. In gradients of from 1 in 20 to 1 in 17, it would also be easy to add the safety brakes employed at the Croix Rousse, near Lyons.

PULLEYS FOR SUPPORTING THE MOTOR ROPE.—One of the chief inconveniences hitherto attending funicular traction, is the fearful wear and

tear of the motor rope, as well as of the pulleys which support it. The pulleys applied at Dusino appear to obviate this defect. They are made on Atwood's principle—that is to say, instead of the axles turning on fixed bearings, they revolve on four rollers placed in pairs on the same axis. These rollers have only to bear a very slight weight, owing to the lightness of the pulley and of the steel rope, so that it is not necessary to be constantly greasing the axles, as at present. The great mobility of the pulleys considerably diminishes the passive resistance, and renders the sliding of the rope on them almost insensible, thus materially diminishing its wear and tear. As these pulleys are cheap, and take up little space, they could be easily placed in greater number on curves, in order to facilitate the motion of the rope, without sensibly augmenting the expense of the line.

ECONOMIC MANUFACTURE OF TIN-PLATES.

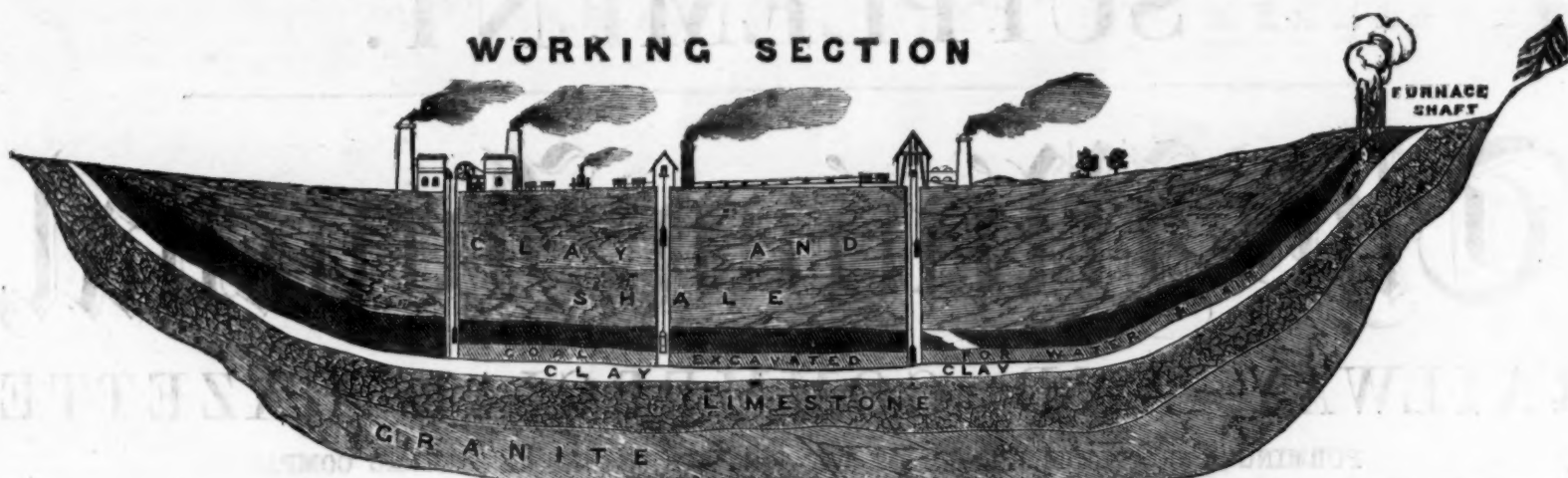
We have just received from Messrs. Saunders and Piper a specimen of tin-plate, manufactured by the improved process invented by them, and to which we alluded in a recent number of the Journal. For regularity of coating and general finish, the plate is not to be surpassed—the superiority becoming particularly apparent upon comparison with a good plate manufactured by the old method. The smoothness is absolutely equal from the very extremities of the plate, both in length and width, and the rib, usually so objectionable on a tin-plate, is scarcely observable. This superiority is readily accounted for when the difference between the two processes of manufacture are considered. In the old process of making plates the metal, either tin or terne, was drained down to the required thickness by the plates being placed vertically in a rack in a pot of hot grease, and the amount of coating required was regulated by the time the plates were kept immersed, so that by this mode the plates requiring the heaviest coating of metal consumed the smallest quantity of grease. Plates so made represented inverted wedges as the metal by the action of the grease left the tops of the plates always more bare than the bottoms; on the bottom edges of the plates, also, a rib of metal was left, and this was dipped into a shallow pot of hot metal, and then the plates being struck by a stick the rib was reduced. By the new process the plates are passed through the rollers, working in grease as described, as fast as possible. The general results are as follows—The plates, instead of representing wedges, as above described, have the coating spread equally over their entire surface, thus giving equal brilliancy and smoothness to them—a great desideratum hitherto. Combined with these improvements in appearance, there is great economy in the consumption of tin or terne metal, grease and sharps for polishing, and labour. There is also an increased power of production from the saving of time in rolling out of grease as compared with the old mode of drawing. Large plates can also be made, not only without extra expense, as in the old process, but with a saving as compared with small ones. It will be recollected that, according to Messrs. Saunders and Piper's process, a pair of rollers are placed, and revolve in a shallow trough, and are mounted in bearings, carried by levers pressed together by springs, so as to impart the desired pressure to the rollers. The grease is retained in this trough to any desired height by means of an overflow-pipe, the delivery end of which may be raised or lowered. There is also a separate grease trough at one end, in which the necks of the rollers, their axes, and clutch-boxes revolve, from which also there is an overflow-pipe. The axes which give motion to the rollers are driven by friction surfaces, which are pressed together by a weighted lever. Below the trough in which the rollers revolve, and in connection therewith, there is a descending trunk, the lower end of which descends to the bottom of another trough, into which the tin or terne metal removed from the plates descends, and from it such metal is removed. There are openings at the lower end of the trunk through which such metal flows into the receiving trough below, whilst the melted metal in the lower trough supports the grease in the trunk, and in the upper trough. The coated plates are placed in succession into a portion of the upper trough; which is divided off by a partition, and each plate as it is introduced descends into the trunk, till its lower edge rests on a lifting-bar or cradle therein, and such plate is then caused to assume a vertical position in the cradle by fingers which are mounted on an axis above. These fingers give way as the plate descends in an inclined position into the trunk, and then the fingers by pressing against the plate cause it to assume a vertical position in the cradle, which is below the nip of the rollers. The lifting-bar or cradle is then raised by a lever handle, which brings the upper edge of the plate to the nip of the rollers, so that by the revolution of the rollers the plate is raised out of the grease, which is kept heated by any suitable means.

NEW ACT ON PUBLIC COMPANIES.—An Act was passed in the late session, which will practically take effect in the next, to consolidate in one Act provisions frequently inserted in Acts relating to the constitution and management of companies for carrying on undertakings of a public nature. The Act is divided into four parts, and treats of the cancellation and surrender of shares, additional capital, debenture stock, and the change of names of companies. A company may cancel forfeited shares, and may enforce payment of calls in arrear, notwithstanding the cancellation. A company may accept on terms the surrender of any shares which have not been fully paid up, but a company is not to pay any money for or in respect of the cancellation of shares. By this Act any misused stock or share may be cancelled.

Bray's Traction-Engine Company has received from the Russian Government an order to manufacture several of the traction-engines and carriages, similar to that in use at Woolwich Dockyard, for the removal of timber and heavy loads.

COLLIERY WORKINGS IN BOHEMIA.

WORKING SECTION



During the last few years considerable attention has been directed to the resources of Central Europe, mineralogical and commercial, as offering an eligible field for the investment of capital, and of all countries Austria has been, perhaps, the most regarded. Situated in the centre of the European continent, extending to the Adriatic on the south, and connected by large and navigable rivers with the German Ocean, the Baltic, and the Black Sea, the introduction of railways was alone necessary to render the great resources which this empire undoubtedly possesses available. Austria is, perhaps, the only country in Europe which could exist in an entirely isolated position; but with a soil producing corn of all kinds, timber, flax, hemp, wine, and tobacco, and with mineral productions of coal, iron, lead, copper, silver, tin, and even gold, it would not be difficult for it to be so.

Coal exists in Austria in various and widely scattered directions, in Austrian Poland, in Styria, in Austria proper, and in Bohemia especially large deposits of this necessary mineral are found. In some beds the coal is a good stone coal; in others an inferior class of the same coal, in comparatively thin layers; in others it is a lignite of a close texture and brownish black colour, splitting with a strongly marked woody fracture, containing no trace of sulphur, burning with a bright but not very yellow flame, leaving a light feathery ash, and producing an agreeable aroma. Such a class of coal, in immense seams or beds of 50 to 60 ft. in thickness, is found in the north-west of Bohemia, in the neighbourhood of Teplitz; and to this, the Teplitz basin, or, more correctly, basins, the attention of English capitalists has been more especially directed. There are at the present time four collieries worked by English capital—the Rosenthal, the Elbe, the Teplitz, and the Karbitz collieries; the first being worked by a few gentlemen privately, and the three latter by limited companies. In addition to these several coal pits worked by native capital, with highly satisfactory results; and two more are, we understand, about to be set to work. The Elbe Colliery has been started about two years; it is situated close to Mariaschein, on the Teplitz Aussig Railway, which separates it from the Rosenthal Colliery, and is, undoubtedly, a most valuable property. The seam of coal, of which there is only one, as will be seen from the above working section, is about 54 to 60 ft. in thickness, and is won at a depth of about 70 to 75 fms. It is a very fine quality of lignite, though not equal to Cannel, and any quantity which can be raised will meet a ready sale at profitable rates. The Karbitz Colliery is to the north-west of the Elbe, nearer the outcrop of the coal. This is also a very valuable property, but it is not in such an advanced state as the Elbe, and, therefore, cannot be expected to make such early returns; still, with good management, it cannot fail to give considerable profits. The above-named mines are all on the Aussig side of Teplitz, and on or adjacent to the railway. The Teplitz Colliery is about five miles from Teplitz, and near the town of Dux, celebrated as the residence of Wallenstein. The works here are also, we understand, progressing most satisfactorily, under the able superintendence of the company's engineer. As it will be necessary to connect the colliery with the Teplitz Railway before great returns can be calculated on, the company have, we hear, obtained the concession for their line, which will be commenced forthwith.

There is only one drawback to these properties—the very heavy dues or royalties which, though, perhaps, sufficient to eventually interfere with the property, still, being a first charge on all coal raised and sold are necessarily a drawback. The royalties on the Elbe Colliery are 10d. per ton; on the Teplitz, 10d.; and on the Karbitz, 8d.; and we understand that the colliery above mentioned, as about to be introduced, is not to be thus clogged, the extent of the royalties being 4d. per ton. This is, we understand, to be called the Aussig Colliery Company (limited), the property being situated close to Aussig, on the Elbe. With the advantage of greater proximity to the river and the depot station of the railway, of smaller royalties, and ample capital, combined with an energetic management, this cannot fail to take a leading position among the collieries of the Teplitz basins. Of the other productions of Austria mentioned above, we may speak more fully at a future period; for the present it will suffice to say that within a short distance of these collieries are rich tin, copper, and silver mines, which have been worked for centuries, and for smelting which the coal is thoroughly applicable.

PROMOTION OF MINING COMPANIES—PROMOTERS' ARRANGEMENTS.—During the past year the winding-up of the Wheal Emily has revealed some rather interesting particulars relating to the doings of those engaged during the early infancy of a mine adventure in (to use the expressive definition of Lord Justice Knight Bruce) "casting the net;" but the final result cannot but be regarded as affording to the public the guarantee that promoters must act in good faith, or pay a heavy penalty for their shortcomings. That the public can be secured more honestly amongst promoters than amongst other dealers is not to be hoped, but they may feel as confident of protection in connecting themselves with a mining company as in an undertaking of any other commercial transaction. In 1867 a company was formed for working Wheal Emily, at Gwiltian, in Cornwall, the promoters being Mr. Hugh Stephens, Mr. John Cox, of Streatham, Surrey, and Mr. Crawford. The mine was to be divided into 1000 shares, and a call of 2l. per share was to be made for working the concern. Mr. Cox was to take 275 shares, Mr. Crawford a similar number, and the remainder were to be disposed of by Mr. Stephens. On the allotment of the shares taking place, it seemed to have been arranged between Mr. Stephens and Mr. Cox that the shares should not appear in Mr. Cox's name, but that 100 should only appear in the cost-book as belonging to him, and that 200 should be placed in the names of two persons called Pulley and Giles. Mr. Crawford failed in paying the call on his shares, but the list was subsequently completed, and operations were commenced. The undertaking, however, was unsuccessful, and operations ceased in 1869; and when the "Companies Act, 1862," came into operation, a petition was presented to the Stannaries Court for winding-up under that Act, which was heard before the Vice-Warden, at Exeter, on Nov. 20, 1862. The petition was opposed, but, after the hearing, the Vice-Warden made the order, and thereupon the usual advertisement to creditors was issued. A list of the contributors was made out and deposited in the office of the Registrar, according to the rules of the Court, in which Mr. Cox's name was included as the holder of 300 shares, being the 100 standing in his own name, and the 200 standing in the names of Mr. Pulley and Mr. Giles, the remaining 75 shares, not having been strictly allotted or transferred to Mr. Cox, were considered to be the property of Mr. Stephens. On notice of the list being sent to Mr. Cox, he attended upon the Registrar, through Mr. Roxburgh, of the Chancery Bar, and after a long argument by the learned counsel on behalf of Mr. Cox, and Mr. Marzack on behalf of the petitioner, the Registrar retained Mr. Cox's name on the list in respect of the 300 shares. From this decision Mr. Cox appealed, and the case was fully argued before the Vice-Warden in February last. His Honour took time to consider, and ultimately confirmed the Registrar's decision—hence the recent appeal to the Lord Warden, by whom it was remitted to the Lords Justices, as authorized by the Stannaries Court Amendment Act of 1855. There was no contest about the 100 shares, but the question was as to the 200 shares. It appeared that Mr. Stephens had stated that he had never seen Giles and Pulley at the meetings of the company; had never sent them notices of their meetings; and their names had been entered by Cox's desire, because it would look better than if all the 300 shares stood in his name. The notices of calls were sent to Cox. On the other hand, Cox said that there was a joint transaction between himself, Stephens, and Crawford, and that Giles and Pulley were trustees at all, they were trustees for the three persons just named. In cross-examination, he admitted that Giles was dead, and had left no property that he knew of. Pulley resided near Cox, who described him as a retired tradesman, and a friend of his. These two persons signed the transfers, but Cox owned that he had never received a shilling from either, and declared that they held the shares for the joint benefit of himself and Stephens, and that if there had been any profits, these would have been divided between himself and Stephens. No doubt the evidence was conflicting, but there was no satisfactory evidence upon which to put the appellant on the list of contributors in respect to the 200 shares. For the appellant it was

argued, that from an account presented to the shareholders, the balance against the mine in 1862 was only 25l. 16s. 6d., which was apparently the only liability outstanding. There was to be a joint transaction between Cox, Crawford, and Stephens, in respect not only of these 300 shares, but in respect of an interest representing three-fourths of the mine, which was divided into 1000 shares. Giles and Pulley held these shares, not for Cox individually, but in consequence of some ill-defined arrangement—as to which there was no evidence—between the three persons already named, and to carry out some speculation in which they were jointly interested. He submitted that it was irregular here to have inserted the names of the *cestui que trust* upon the list of contributors, and that, therefore, the decision of the Vice-Warden ought to be reversed. Mr. Baggeley, who appeared to support the decision of the Court below, said this was the first instance in which an appeal had been brought before their Lordships from the Stannaries Court under the new Winding-up Act. The point for decision might be very shortly stated. First, whether the 200 shares were not held by Pulley and Giles simply as trustees for Cox; and if so, was not that trust improperly entered into for the purpose of inducing shareholders to come forward and join the company? Cox alleged that there was a joint beneficial interest, and admitted that the trustees were not to be the losers; but he contended that the evidence of Stephens as to Cox's ownership was clearly corroborated by the correspondence. The public were to be misled by holding out a larger constituency than really existed, in order that persons might not be prevented from taking shares by seeing that they were in such few hands. So Pulley and Giles were brought into the books—they to derive no interest from the shares under any circumstances, while Cox was to derive all the profit, and escape all the liability, if any. The learned counsel referred to several cases in which, where similar attempts had been made to delude the public, and where, the object evidently being to avoid liability, the names of the transferees were retained on the list of contributors. Here the object was the same. In effect, Cox said, "if there is any benefit, I will take it; if not, I will leave you to get the calls out of men of straw." The whole case was well put in the decision of the Vice-Warden, who heard the case on appeal from the Registrar, and who had given it a careful consideration. The Vice-Warden gave judgment on May 12, and taking it as an admitted fact that the real owner of the 200 shares was Cox, he held that the names of Giles and Pulley were merely relied upon by him to shield him from liability, and that Cox was liable, both as an actual and dormant partner. For the appellant it was urged, in reply, that it was an entire fallacy on the part of the Vice-Warden to assume that the ownership of Cox, in respect of the 200 shares, was admitted. Nothing of the sort. It was contended by the appellant that Stephens was jointly interested with him, and if any other persons than Giles and Pulley were to be the contributors, it should be Stephens alone, since he had signed the arrangement actually entered into. Lord Justice Knight Bruce: I am of opinion that the conclusion of the learned Judge of the Stannaries Court is correct. That Cox is substantially the owner of these 200 shares is undisputed and undisputable. Though, in a sense, the two gentlemen named, Pulley and Giles, might have been, according to one use of the term, trustees for him, yet it was not a trust of the ordinary kind. Their names were used for the mere purpose of holding out, erroneously, to the world that the 300 shares were held not by one person, but by three, so as to induce the unwary part of society to suppose that there was a greater number of members in this company than in fact existed. This, I say, is no ordinary trust, and I am not prepared to admit that, even if the Act of 1862 had not been passed, the result would not have been the same. But looking at the language of that Act of Parliament, and the undisputed facts of the case, I have no doubt whatever that Cox is properly placed on the list of contributors in respect of 300 shares. As to 200 of them, I am not sure that some person or persons should not be added. That may be a question, and as far as I am concerned I have no objection, if it should be wished, to declare in our order that it is to be without prejudice to any application which may be made to add the name or names of any person or persons in respect to these 200 shares. But I think the appellant must pay the costs of the appeal.—Lord Justice Turner concurred, and for the same reasons. It appeared that Cox had undertaken to find 750l., if Crawford would advance the same amount, and that this undertaking extended to 350 shares a piece. The appellant had been fortunate enough to escape liability as to 75 of these shares, but he must be fixed with 300 of them, subject to any future application in the terms suggested by his learned brother.—Lord Justice Knight Bruce: The judgment of the Court below will be affirmed without prejudice to any application to add the name or names of any other person or persons in respect of the 200 shares. This must not be in substitution for Mr. Cox, but in addition to his name.—Appeal dismissed as directed, with costs.

Meetings of Public Companies.

TINCROFT MINE COMPANY.

A meeting of shareholders was held at the account-house, on Monday, Capt. TEAGUE, the manager, in the chair.

The accounts showed a profit for the past quarter of 3080l., exclusive of a parcel of copper ore not credited, estimated at 400l.

The CHAIRMAN said it was with feelings of great pleasure that he again met the shareholders at the usual quarterly meeting. The shareholders present, many of whom were practical men, would see by the report of the mine, presented to them, that their property was in a most prosperous position. In fact, at no former period during his management has the mine looked so well. The recent improvement in Danks's lode, and the discovery of the highly important tin lode, as well known to many present, has proved hitherto one of the most productive lodes in the district. Then with regard to the piece of tin ground approximating to Cook's Kitchen Mine—who could estimate the value of that with any accuracy? This he could say, that it was very valuable, and high and dry for about 100 fathoms. None of this ground had, as yet, been touched by the Tincroft Company, with the exception of one level being driven, the lode in which was worth upwards of 70l. per fathom. None of this ground had been stepped away. Reviewing, therefore, the improvement that had taken place in Danks's lode, and other parts of the mine, exclusive of the immense quantity of tin ground opened up on Chapel's lode, he felt quite justified in saying that Tincroft, although very prosperous now, was, if he might use the term, only just emerging from its infancy, and he looked forward with much pleasure, and the utmost confidence, to meeting the shareholders quarterly, and giving them a continuance of dividends for many years to come.

Mr. T. S. BOLITHO, in proposing that the accounts now presented be received and passed, enquired of the manager if everything, so far as he knew, was charged up fairly; and, being answered in the affirmative, said it was a source of very great pleasure to him to see a balance-sheet before him showing at a glance the true financial position of the company; and, while congratulating his fellow-shareholders on the prosperous condition of their property, he could not refrain from referring to the liberality of the lord of their mineral rights. He regretted to say that there were very few, if any, such instances of liberality as Mr. Robertes had exhibited. A new lease, which now lay on the table, had just been granted to this company for 21 years, at 1-26th dues. He could scarcely find a similar instance of a landlord granting a new lease, not, he it remembered, of a poor mine, but of a property in a dividend state, at the very liberal dues of 1-26th part. Not only had he been liberal in this, but Mr. Robertes had given 300l. towards a man-engine, to be erected on the mine within 12 months, and he (Mr. Bolitho) would be very glad to see this completed.

Capt. TEAGUE said that this question had not been lost sight of by him. Preliminary preparations had already been made for its completion. The expense of this machine would not interfere with the usual dividends, as the expense would be charged monthly with the usual costs of the mine.

Mr. THOMAS FIELD said that the present successful position of Tincroft could not fail to show what can be done in bringing mining property from a state of comparative poverty into a prosperous state by a judicious and able management. He would ask the shareholders whether it did not appear to them to be a perfect anomaly to entrust the management of their property to a board of directors in London, who were not, nor could it be expected they should be, at all conversant with mining matters? Under the good old Cost-book System, the shareholders are now enabled to attend the meetings on the mine. Many now present, he observed, were agents and practical men, who were enabled to judge whether their property was properly managed or not. He was glad to see so many of this class present, as it showed the confidence they felt in the management. Mr. H. J. HOWLAND said it afforded him much pleasure in attending this meeting. Sometime since he had been induced to part with a portion of the interest he held in Tincroft. Had he visited the mine previous to doing so, probably he should have held the whole of his interest now. Although knowing nothing about the practical parts of mining operations, he was impressed with a conviction that there was great stability in the prospects of this property, and knew of nothing that would pay him better interest for his capital with the same degree of safety.

Mr. EDWARD COCKS said that he had travelled through the last night to be present at this meeting. It was, no doubt, painful to all present that he had been identified with Tincroft Mine for several years, and had, as had been observed by one of the speakers, been the medium of his acquiring a very large interest in this mine, at an average price of some 6l. to 7l. per share. He considered that Capt. Teague was entitled to the gratitude of all those whose occupation consisted in directing the public to the mining interest of this country as a means for the investment of their capital. It is to such properties as this we can point with great encouragement when applied to by our friends to invest their money, in order to get a better return for it than ordinary securities give. As had been said during the meeting, there are some mines I would rather invest in, and receive only 8 per cent., than in others paying a much higher rate. In Tincroft we are receiving 10 per cent. in dividends on the current price; while occasional bonuses

will increase it to 12½, or more. On the latter subject, however, our manager is silent, but of that I think nothing about. Acts and not words seems to be his motto. Judging from all I have heard and seen, I feel satisfied that in Tincroft we have a dividend property for very many years to come.

A conversation of a practical kind then took place between the manager and the parties present; and allusion having been made to the lode in the mine, which adjoins Tincroft on the north, Capt. Teague stated that the great confidence he had in the success of this property, when it was fairly developed, induced him to hold a large interest in it, and although a call of 2s. 6d. per share had been made to-day, he trusted that at the next meeting a less one would be deemed sufficient. In the meantime a good discovery was by no means unlikely to take place. A cross-cut was being prosecuted to cut Macdonald's lode, which lode in the adjoining mine, Carn Brea, had produced an enormous quantity of ore (or it might probably be East Carn Brea lode). These lodes are running through the length of Illogan sett. He, therefore, was not without hopes that a good mine would be opened up there. At present everything was looking as well as he could expect it to.—The meeting then separated.

WEST PAR CONSOLS MINING COMPANY.

A general meeting of proprietors was held at the company's offices Austinfrs., on Tuesday.—Mr. JARDINE in the chair.

Mr. J. H. MURCHISON (the secretary) read the notice convening the meeting, and the minutes of the last were approved.

A statement of accounts was submitted, which showed a balance of liabilities over assets of 1892l.

The report of Capt. Puckey (chief agent at Par Consols) was read, as follows:—

Nov. 26.—Since I inspected the mine, in November last, Danks's shaft has been sunk below the 65 on the course of the lode 15 fms., or to the 80. For a great portion of this sinking the lode has been discovered by a horse of kilaas, mixed with branches containing a little tin, and occasionally producing good stones of copper, but not sufficient of either to pay for working. In the bottom of the shaft these branches have again become united, and the lode is now taking a more perpendicular direction, but it is not cut through; as far as seen the lode is fully 3 ft. wide, composed of peach and quartz, coated with mndie, a very promising lode, and letting out a large stream of water. The 65 end has been extended about 30 fms., and is now 74 fms. east of Danks's shaft; the lode in the last 10 fms. driving is very much improved, and will average about 2 ft. wide, worth 2½ cwt. of tin to the 100 sacks. The lode in the present end is 1½ ft. wide, worth fully 4 cwt. of tin to the 100 sacks, or 6l. per fm., and kindly for further improvement; price for driving the end 55s. per fm. In the slopes in the back of this level, a few fathoms behind the end, the lode will average 1½ ft. wide, and will yield 1½ cwt. of tin to the 100 sacks, and also some good work for copper, worth 6l. per fm.; cost for stopping 30s. In the 55, east of the same shaft, the lode is small and unproductive. The 30 is driven east of Danks's shaft 24 fms., and west 13 fms.; for this driving the lode is from 1 to 2 ft. wide, producing a little tin, but not sufficient to value. For the further working of the mine, I would recommend that Danks's shaft be sunk below the 80 with all speed to the 95, and then to drive the 95 west under the large and promising lode that is gone down below the 65, west of the shaft, in expectation of meeting with good bunches of tin in that direction, which I consider more than an ordinary speculation, and also to extend the same level (the 95) east under the run of tin ground. The driving of the 80 east, on the course of the lode, by a full pair of men. In driving this level about 10 fathoms east of the shaft you will intersect a cross-course; after passing the cross-course you may expect the lode will prove productive for tin; and, also, to continue the driving of the 65 east by four men, as more ground must be laid open before making sufficient returns to pay the cost of the mine. By carrying out the above-named objects you will get the mine in good working order, and I have no doubt remunerate the adventurers for their outlay.—FRANCIS PUCKEY (of Par Consols).

The report of the agent was read, as follows:—

Nov. 27.—Since the last general meeting of this mine, Danks's shaft has been sunk 12 fms.; the lode will average 2½ ft. wide, composed of peach, spar, and capel, producing both tin and copper, not enough to value, although a very promising lode; the plat has also been cut, and the wagon-road will be completed in a few days from the 65 to the 80, after which we shall commence to drive east at the last-named level. We shall have to drive about 8 or 10 fms. to reach the main cross-course, about which there has been a large quantity of tin raised throughout the mine, and as there have been several bunches of tin met with in the 65, driving east, and which appears to be just skimming over them, my opinion is that good results will be obtained in driving this (80) level east. There is also a strong mastery lode for 90 fms. in length, west of Danks's shaft, averaging 3 ft. wide, containing tin for the whole length, but not sufficient to pay for working. There has been a quantity of tin raised over this ground about the 45 and 65, and I have no doubt that it will again prove productive at a deeper level, and, in support of this opinion, I may state that in the adjoining mine the 60 was poor throughout, while at the 70 and 80 very large deposits of tin were met with. The 45 has been driven east of Danks's shaft 21 fms.; the lode for this drive averaging 3 ft. wide, composed of peach, spar, and capel, averaging 2½ cwt. of tin to the 100 sacks. The lode for the last 5 fms. driven has been gradually improving, and will now yield in the present end 4 cwt. of tin to the 100 sacks, or worth 6l. per fm. for tin, with a good branch of yellow copper in the back of the end, 5 ft. wide. The lode in the slopes in back of this level is somewhat improved in value, being 1½ ft. wide, producing from 1½ to 2 cwt. of tin to the 100 sacks, with a branch of black and grey copper ore, 4 in. wide, of rich quality. The lode in the 55 end, east of Danks's, is divided by a horse of kilaas, each part about 6 in. wide, containing tin, but of no value at present, and as the lode in the back of the 65 is looking well, and only 6 or 7 fms. in advance, I think we shall not have far to drive before we get into the run of tin ground; this work will also be required for ventilation. The 30 end east has been driven 5 fms., lode averaging from 1½ to 2 ft. wide, composed of peach and spar, producing tin of low quality. The 30 fm. level and west has been driven 15 fms.; the lode for this distance will average 1½ ft. wide, composed of spar and peach, chiefly of the latter, with tin, but not sufficient to value. Having evidently driven over some good tin ground in the 65, east of Danks's, I anticipate good results very soon in the 80 when driven in the same direction, and when we have driven through the main cross-course at this (80) level, we shall be enabled to stop the bottom of the 65, if required, which cannot now be done on account of this cross-course keeping up the water; this, I believe, will also prove a very profitable piece of ground. Should the lode prove productive at the 80 east, I propose to take down Danks's sink, to the 10 or 12 fms., and then explore under the large and promising lode in the 65, west of Danks's shaft, this would lay open a very extensive piece of ground, and I have great confidence of meeting with good bunches of tin in that direction at a deeper level. In the meanwhile our object is to drive east at the 80, also keep the 65 in the same direction. On the whole, I am very well pleased with our prospects for the present, and trust shortly to have to report something cheering.—W. WOOLCOCK.

Mr. RICHARDSON enquired if they had a good lode in the bottom of the 65?—Capt. WOOLCOCK said that they had gone over a good lode for a length of 20 fms.; and not only so, but before reaching this ground they went over several bunches of tin.

The SECRETARY enquired what distance they had to drive to get under this ground in the 65?—Capt. WOOLCOCK replied about 15 or 20 fms. It would cost about 6l. per fm. for driving from the shaft, but he believed when they properly got into the lode the ground would be found much easier.

Mr. F. COCKS wished to know if the cost of driving had been materially reduced in driving east in the levels above?—Capt. WOOLCOCK said that it was a material reduction, for when nearer the shaft it cost 6l. or 7l. per fathom, but now only 55s.

Mr. RICHARDSON thought, as the 70 and 80 were the richest levels in the adjoining mine, Par Consols, that a level at the same depth should be driven in West Par. The SECRETARY explained that they were driving a 65 fm. level, and about to drive at the 80, but the shaft had been sunk on the course of the lode, so that it was not so deep perpendicularly.—Mr. F. COCKS asked if they in West Par had yet passed through the same interval of barren strata as they had had in Par Consols?—Captain WOOLCOCK said they were just getting into the run of tin ground in the eastern ground, and he thought well of the western ground, and also of finding a much better lode as they went down.

The SECRETARY reminded the meeting that in Par Consols there were as many poor as there were rich places, and what they in West Par had to hope for was, that they were not in one of the poor places. They must open on the lode more extensively.

Mr. HOWLAND asked the average cost per month?—Capt. WOOLCOCK replied that the total cost, including merchants' bills, was about 2500l. to 3000l. per month.—The CHAIRMAN enquired the cost of sinking the shaft?—Capt. WOOLCOCK replied about 18l. per fathom. They would sink at the rate of 2 fms. per month.—Mr. RICHARDSON had read a report in the Mining Journal, in which it stated that the lode in the 65 was turning out good work for tin. He wished to ask if it still presented encouraging features?—Capt. WOOLCOCK stated that the lode was now looking very well—in fact, the stones of ore upon the table (which spoke for themselves) came from that end; but, as yet, the lode had not been proved. They were now stopping good tin ground, and they had some tin in reserve.

The SECRETARY stated, if the shareholders would pay their calls regularly a very great saving would be effected.—Mr. FANTLEROY would like to see 100 more men employed underground, for he was convinced that West Par would well repay for a vigorous prosecution.

The SECRETARY said the general opinion among all practical authorities was that West Par only required to be carried on with energy to make it a good mine. Mr. FANTLEROY said that he had recently visited Cornwall with a gentleman largely interested in mining, who expressed a willingness to at once join the company if the mine were vigorously developed.—The CHAIRMAN thought that the indi-

minions most certainly warranted a more vigorous development.—The accounts were passed and allowed, and the reports received and adopted.—A resolution was passed to the effect that steps be at once taken to recover arrears of call.

A discussion arose as to the amount of call that should be made, when Mr. HUGHES proposed, and Mr. HUGHES seconded, a proposition to make a call of 1s. per share. Mr. FARMAN seconded, as an amendment, which was seconded by Mr. ROBERTSON, that it be 2s. per share.—The amendment was put, and carried, only the mover and seconder voting for the original resolution. Thanks to the Chairman terminated the proceedings.

DRAKE WALLS MINING COMPANY.

A general meeting of proprietors was held at the company's offices, Winchester-buildings, on Wednesday.—Mr. J. BALSTON in the chair.

The notice convening the meeting having been read, a statement of accounts for three months, ending with costs for September, was submitted, from which the following is condensed:—

Balance last audit	£ 753 9 1
Tin sold (July, August, and September)	4190 0 8
Tungstate of soda	89 10 0 = £5025 19 4
Mine cost	£4014 7 10
Disbursements	33 15 8 = 4048 1 6
Leaving credit balance	£577 17 10

The report of the agents was read, as follows:—

Dec. 1.—Matthews Shaft: The branches in the 102, east of Matthews's shaft, are worth 81. per fm. for tin, with a little copper ore, and occasional patches of granite. We have two stopes in back of this level, by 16 men, in tin ground, worth 71. per fm. There are six men stopeing the bottom of the 102, west of Matthews's, in order to send the water back to the pumping-engine direct, as we advised you some time since; at this point good progress is being made. In the Tye, or 30, east of Matthews's, the branches are producing saving work; there are 10 men stopeing below this level, in tin ground, worth 64. per fm. We have eight men stopeing below the 70, east of machine-shaft, in tin ground, worth 91. per fm. There are eight men stopeing below the 70, west of machine-shaft, in tin ground, worth 71. per fm.—Brenton's Shaft: The branches in the 61, west of Brenton's, are worth 151. per fm., and are of a very promising character. There are six men stopeing below the 60, in tin ground, worth 101. per fm. The branches in the 50, west of Brenton's, and west of the cross-course, have rather improved, being now worth 101. per fm.; there are six men stopeing below this level, in tin ground, worth 71. per fm. The branches in the 40, west of Brenton's, have been discovered for some time past, with hard floors of capels and granite. We have now a favourable change in the ground, and an improvement in the branches, which are increasing in size, and worth full 131. per fathom, with good indications of a further improvement. We have three stopes in back of this level by 18 men, the branches in which are worth 91. per fm. There are three stopes in the back of the 30, in tin ground, worth 91. per fm. We have cleared out and resumed the drive of the old adit level, west of Brenton's shaft, the branches in which are worth 61. per fm. There are six men stopeing below the adit level, east of Stephen's winze, the branches in which are producing saving work; we expect an improvement here as we extend away from the winze.—Bettley's Shaft: We purpose making the alterations in the sinking-lift as early as possible, so as to sink this shaft about 9 feet deeper, which will be at a level with the 102, west of Matthews's; when this work is completed the water-wheel will be relieved from pumping and converted into a drawing-machine. Matthews's crusher will then be fully occupied day and night in crushing. No. 3 copper lode is 2½ ft. wide, and has produced for some fathoms about ¼ ton of good ore per fm. The ground having become rather harder, the lode is not so productive, but yield occasionally good stones of copper ore. The ground being hard in No. 10, cross-cut, the men have been placed to drive on the course of the lode, which has presented very strong indications of an early improvement, until we cut the hard capels, which we consider is only a temporary change. We are shodding through the north part of this set in search of the old Gunnis copper lode, which has been very productive, and is situated in granite at no great depth below our present workings; a discovery here would be of the greatest importance. Since last meeting we have put in new old girders, saddles, bolts, &c., and made other necessary repairs to Brenton's engine and fly-wheel loadings, the whole of which is now in good condition. These repairs have caused a delay in crushing, and a deficiency in sampling. We are now drawing and dressing increased quantities of tinstuff, and hope to make up for the delay occasioned by these repairs. In order to have a better supply of water in the dry season we are enlarging our reservoirs, and propose driving an adit from the eastern stamps back to Matthews's crusher, so as to return the water again to the cleaning-floors; it will be a great benefit, if carried into effect. The necessary sheds and spalling-floors have been erected at Brenton's shaft, and tram-roads laid for the proper discharge of all stuff. The carrying out of this work has somewhat increased the costs; however, it is now nearly at a close, and no further outlay in this department will be required. The quantity of tinstuff drawn for the quarter ending with September amounts to 16,034 kibbles and agons. We have about 1501. worth of copper ore, and 10 tons of tin stuff, in the mine for market. There are 450 persons employed in and on the mine.—THOMAS GREGORY, JAMES HOSKIN.

The CHAIRMAN said that Mr. Bettley was present, who would be glad to afford any further information that shareholders might desire.

Mr. R. HAWKE enquired the distance between Brenton's and Bettley's shafts?

Mr. BETTLEY replied that there were about 20 fms. more to stope, and about the same distance to drive. He calculated that with the present pair of men it would take ten or twelve months to accomplish this; if the number of men was increased, it might possibly be accomplished in nine months.—Mr. HAWKE considered it was of importance that this point—the holding of the two shafts—should be accomplished as speedily as possible, as it was one of the most important in the mine.

Mr. GOSLEY, in answer to a question, stated that the balance actually available was 7812. 9s., subject to the little variations from the tin account.

Mr. HAWKE enquired if all the liabilities were charged?—Mr. BETTLEY stated that every known liability up to the end of September was charged.

Upon the proposition of the CHAIRMAN, seconded by Mr. HAWKE, the accounts were passed and allowed, and the report received and adopted.

The CHAIRMAN stated that the profit during the quarter amounted to 2741. 8s. 9d. The following report of West Drake Walls was then read:—

Nov. 30.—We have continued the drive of the cross-cut adit and shodding on the Drake Walls tin branches since last meeting, and our operations have been attended with satisfactory results. We have much pleasure in informing you we have opened on the course of the Drake Walls tin branch for 150 fms. in length; the greatest part of this distance we find good work for tin ore, with every indication of laying open a good productive mine. The south copper lode is of a strong masterly character, being composed of quartz, gossan, abundance of mounds, and stones of copper ore, at a depth of 3 to 4 fms. from surface. We would advise that a 28 or 30-in. cylinder rotary steam-engine, with 12 heads of stamps, be purchased and erected here at once; judging from present appearances, we should be able to make returns of tin ore at no very distant date.—THOMAS GREGORY, JAMES HOSKIN.

Mr. HAWKE said he was about to propose a resolution to the effect that the committee of management consist of local shareholders. A large majority of the shares had been purchased by himself and friends, who were desirous to have the mine more in the country.—The CHAIRMAN said that he would be glad in any way to further the wishes of the Cornish gentlemen.—It was then resolved that Mr. HAWKE, J. Bayly, A. C. L. Gibbs, H. Caunter, and J. C. Isaac be appointed the committee of management.

The CHAIRMAN wished them every success they could wish themselves.

Mr. OLIVER said that, although he was but a young adventurer in this mine, he had known some of the members of the committee for a long time, and, therefore, he might take upon himself to express on behalf of the Cornish shareholders their thanks to the late committee for the business-like and efficient way in which the affairs of the mine had been carried on.—The resolution having been duly seconded, it was put and carried unanimously.—The CHAIRMAN, in acknowledging the compliment, stated that he thought the late committee were justly entitled to such a vote, as every detail had been conducted with the greatest care.—The proceedings then terminated.

SOUTH DARREN MINING COMPANY.

A general meeting of proprietors was held at the offices of the company, Austinfriars, on Monday.—Mr. CHATFIELD in the chair.

The meeting, and the minutes of the last were confirmed.

Mr. J. H. MURCHISON (the London manager) read the notice convening

A statement of accounts was submitted, which showed liabilities over assets of 2731. 6s. 9d. The report of the agent was read, as follows:—

Nov. 27.—Agreeably with your request, I beg to hand you my report for the general meeting, to be held on the 30th inst. In the first place, I wish to observe that soon after the meeting, which was in July last, the gudgeon of the balance-wheel broke, in consequence of which the pumping, which was done four days; during that time the water got up to the level of the 70 or 80; I, therefore, have nothing fresh to report here.

On the stope over the 70 east is 3 ft. wide, worth for lead 6 cwt. per fm., and improve. The 60 has been driven east 7 fms.; in this drive the lode has been found to be the same promising appearance as for some time past; the air being bad both in the stope and stopeing, I have suspended it for the present, and put the men to sink a new stope over the back of the 70, to ventilate this part of the mine; as the 40 has been driven west about 17 fms.; in this drive the lode has varied in size from 1 ft. to 20 in., producing at times a little lead and copper, but not enough to value. I find from dialling that we have about 10 fathoms more to drive before reaching the ore ground which has been previously passed through in the 30; this end is being pushed on by six men, and I hope to reach the ore ground in about two months from the present date. The 30 has been extended west about 11 fms.; for the first 8 fathoms the lode became contracted and disordered by a cross branch, which was 15 cwt. of lead and 6 cwt. of copper ore per fathom; the lode in the present end is again opening wider, assuming a more healthy appearance, and letting out more water, which is a favourable indication; I think we shall have a good lode in this end soon; I purpose to sink a winze here at once to meet the 40, driving west, in order to ventilate the 30 and 40, and, judging from present appearances—that is, from the ore ground which has been passed through in the 30—it will, in my opinion, lay open a valuable piece of stopeing ground. The lode in the stope over the back of the 30 west, east of the winze, is 4 ft. wide, valued at 16 cwt. of lead and ¼ ton of copper ore per fathom. Here I would mark that half of the ore occurs on this stope, and the rest on the stopeing and driving will again be resumed.

The 40 has been driven west about 17 fms.; in this drive the lode has varied in size from 1 ft. to 20 in., producing at times a little lead and copper, but not enough to value. I find from dialling that we have about 10 fathoms more to drive before reaching the ore ground which has been previously passed through in the 30; this end is being pushed on by six men, and I hope to reach the ore ground in about two months from the present date. The 30 has been extended west about 11 fms.; for the first 8 fathoms the lode became contracted and disordered by a cross branch, which was 15 cwt. of lead and 6 cwt. of copper ore per fathom; the lode in the present end is again opening wider, assuming a more healthy appearance, and letting out more water, which is a favourable indication; I think we shall have a good lode in this end soon; I purpose to sink a winze here at once to meet the 40, driving west, in order to ventilate the 30 and 40, and, judging from present appearances—that is, from the ore ground which has been passed through in the 30—it will, in my opinion, lay open a valuable piece of stopeing ground. The lode in the stope over the back of the 30 west, east of the winze, is 4 ft. wide, valued at 16 cwt. of lead and ¼ ton of copper ore per fathom. Here I would mark that half of the ore occurs on this stope, and the rest on the stopeing and driving will again be resumed.

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The CHAIRMAN stated that a meeting of directors was to be held immediately after the general meeting, at which it was intended to order notices of forfeiture to be sent to those in arrears of more than one call. At present the loss would probably be about 751. per month, but if they found the ore in the 40 the mine would pay more than costs.

Mr. MURCHISON remarked that Capt. Northey had recently inspected the mine for a large branch, and in his report he estimated the returns at 2701. to 2801. per month, and the costs at 2401. to 2501., and that from present prospects the mine would certainly pay costs in a very short time. He (Mr. Murchison) had also heard that Capt. Northey had spoken very favourably of the general prospects of the mine. It was intended to use the utmost exertion to get the 40 under the rich lode in the 30, and it was believed this would be reached within two months. If the lode were found good in that level there would be little difficulty in soon making profits. As Capt. Northey remarked—"The mine is very extensive, and adjoining the well-known profitable East Darren and Cwm Effra Mines, and there were other mines in the neighbourhood which have yielded large profits." So that South Darren was in close proximity to most of the productive mines in the locality, and where mining enterprise might be calculated upon with a greater degree of certainty than in a partially-developed district.

The report was received and adopted, and the accounts passed and allowed.

Thanks to the Chairman were passed, when the proceedings terminated.

NEATH AND PELENNIA COLLIERY COMPANY.

A special general meeting of shareholders was held at the London Tavern, on Thursday.—Mr. T. OUGHTERLONEY in the chair.

Mr. NIGHTINGALE (the secretary) read the notice convening the meeting.

The CHAIRMAN said the proprietors had been informed by the notice just read that the object of the present meeting was to authorize the directors to take advantage of an excellent offer which had been made for working the ironstone which formed a portion of the company's estate. He need hardly say that the directors would not recommend the adoption of the proposed arrangement, were they not convinced that it was for the benefit of the company. In addition to this, he might mention that the capital was insufficient to develop the ironstone, and, therefore, it was clearly the interest of the proprietors to give the directors the power sought. There was one detail which could not fail to prove very satisfactory to the shareholders, which was this—that the terms of purchase for the entire property had been very considerably modified, of course in favour of the company. It would be recited in the prospectus that a contract had been entered into for the supply of additional rolling stock from the laxity of the contractor; however, it had not been delivered at the appointed time, and the directors now thought they could make much more advantageous terms elsewhere. Although at the present meeting, which had been convened for a special object, the directors could not make any statement as to the actual position of the company's affairs, yet he might state generally that everything connected with their operations had been of a most satisfactory and encouraging character. Mr. Pantor, one of his colleagues, and who was practically acquainted with collieries, had made a private report for the guidance of the directors: that report in every respect confirmed the views previously entertained as to the soundness of the undertaking; and the encouraging prospects of the coal trade, the advance in price, and the favourable result of the recent trials of South Wales coal, were strong additional reasons for believing that this company, as may, in the opinion of the said directors, be desirable for any particular point upon which shareholders required information, the board would be glad to afford it. He concluded by proposing—"That the directors of this company are hereby authorized and directed to absolutely sell and dispose of, for the best price that can be had, all the grant or right to work the ironstone, with the free-play, upon the property of the company, as the same is now vested in the company by their lease, or such part or parts of such grant or right as in their discretion the directors may think fit to sell, grant, or dispose of, and that upon such terms, and for such premiums (if any), subject to such rents, fees, royalties, provisions, conditions, restrictions, covenants, and regulations as may, in the opinion of the said directors, be advisable for, and advantageous to, the interest of this company."—Mr. FAYNE (the solicitor), in reply to a question, stated that if the company granted to other parties the right to work the ironstone, the free-play might also be disposed of in like manner.

The CHAIRMAN stated any operations that might be commenced upon the ironstone and free-play could in no way interfere with the company's workings for coal, inasmuch as the proposed operations upon the ironstone and free-play deposits would be at a distance of a quarter of a mile from the coal. As he had already said, the terms shadowed forth were exceedingly advantageous to the company, and another advantage the company would obtain was, that the whole of the capital could be employed, and he hoped advantageously, in the development of the coal.—Mr. BRAGINTON, in seconding the proposition, stated that he quite endorsed the opinion of the Chairman, that the shareholders would be promoting their own interests by passing the resolution submitted.

Mr. J. BROWN thought it would be satisfactory to the shareholders generally to have some information as to the progress that was being made in the development of the coal.—The CHAIRMAN said that coal was now being raised in fair quantities, and was being sold at good prices.—Mr. NISSETT supported the proposition before the meeting, believing its adoption would prove advantageous to the shareholders. He (Mr. Nissett) enquired the cost per ton of cutting the coal?—The SECRETARY believed he might say it at present cost 2s. per ton.—Mr. NISSETT also enquired the freight

Prize Medals—International Exhibition, Class 1 and 2.

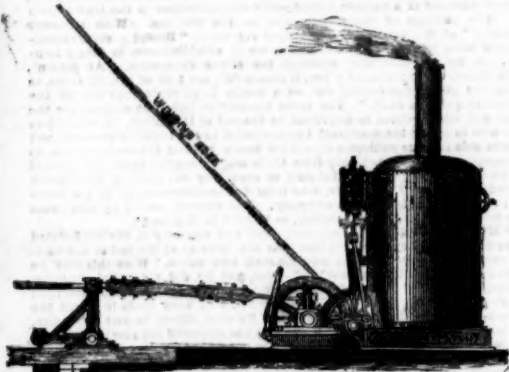
PATENT PLUMBAGO CRUCIBLES.

The CRUCIBLES manufactured by the PATENT PLUMBAGO CRUCIBLE COMPANY are the ONLY KIND for which a MEDAL has been AWARDED, and are now used exclusively by the English, Australian, and Indian Miners; the French, Russian, and other Continental Miners; the Royal Armies of Woolwich, Brest, and Toulon, &c.; and have been adopted by most of the large ENGINEERS, BRASSFOUNDERS, and REFINERS in this country and abroad. The GREAT SUPERIORITY of these melting pots consists in their capability of melting on an average 40 pourings of the most difficult metals, and a still greater number of those of an ordinary character, some of them having actually reached the EXTRAORDINARY NUMBER of 98 meltings. They are unaffected by change of temperature, never crack, and become heated much more rapidly than any other crucibles. In consequence of their great durability, the saving of waste is also very considerable.

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For lists, testimonials, &c., apply to the Patent Plumbago Crucible Company, Battersea Works, London, S.W.
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These engines are SPECIALLY ADAPTED for PITS, QUARRIES &c. They are EXCEEDINGLY SIMPLE in ARRANGEMENT, and STRONG. NO FOUNDATION or CHIMNEY STALK being NECESSARY, they can be ERRECTED or REMOVED with VERY LITTLE TROUBLE or EXPENSE, and are WELL ADAPTED for HOME or FOREIGN USE.

Sizes, from 2 to 25 horse power.

STEAM CRANES, STEAM WINCHES, CONTRACTORS' LOCOMOTIVES, HOISTING ENGINES, PUMPING AND WINDING GEARING, &c.

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CREASE'S PATENT EXCAVATING MACHINERY.

FOR SUPERSEDING THE SLOW AND EXPENSIVE USE OF MANUAL LABOUR IN SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to drive through any rock of average hardness at a minimum rate of 1 ft. per diem, and to sink shafts at the rate of 3 fms. in three days.

Mr. CREASE will undertake contracts for sinking shafts, driving levels, &c., at an enormous reduction of time and great saving in cost.

Applications to be addressed (for the present) to the patentee, Mr. E. S. CREASE, Tavistock, Devon.

By providing the power of calculating the time and cost to explore a certain depth and extent of ground, speculation in mining will be assimilated to commercial pursuits, with this unmistakable advantage—that when the ground has been once carefully and judiciously selected, and operations properly and systematically carried out for its development, there would be far less chance of unsatisfactory results than are met with by merchants and manufacturers in the usual routine of their business. As this important invention must beneficially interest the landowners, mine proprietors, merchants, and miners, we hope it will meet with immediate adoption. —*Mining Journal*

BASTIER'S PATENT CHAIN PUMP.

APPARATUS FOR RAISING WATER ECONOMICALLY, ESPECIALLY APPLICABLE TO ALL KINDS OF MINES, DRAINAGE, WELLS, MARINE, &c.

J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine as daily demonstrated by use:—

- 1.—It utilizes from 90 to 92 per cent. of the motive power.
- 2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
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- 4.—It raises water from any depth with the same facility and economy.
- 5.—It raises with the water, and without the slightest injury to the apparatus, sand, mud, wood, stone, and every object of a smaller diameter than its tube.
- 6.—It is easily removed, and requires no cleaning or attention.

A mining pump can be seen daily at work, at Wheel Concord Mine, South Sydneyham, Devon, near Tavistock; and a shipping pump at Woodside Graving Dock Company (Limited), Birkenhead, near Liverpool.

J. U. BASTIER, sole manufacturer, will CONTRACT to ERECT his PATENT PUMP at his OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors, and others, for the USE of his INVENTION.

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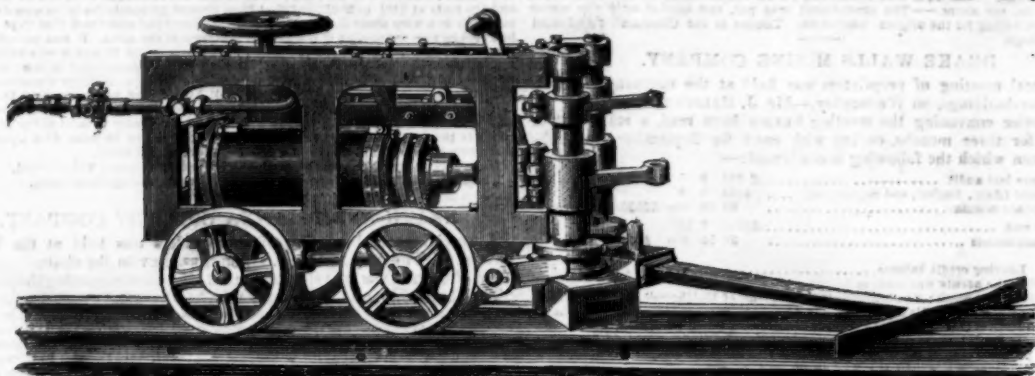
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No. 1 tuyere, 16 in. long	28s. each.
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and Co.

Corresponding sizes from
other manufacturers.

Sizes.	Tons c.	Tons c.	Tons c.
3¼ in.	18 5	16 10	11 10
2½ in.	8 15	7 15	5 0

Remaining sizes with similar results.

Remainder sizes with similar results.

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PATENT FLUE AND TANK BOILER.

JEWELL'S PATENT FLUE AND TANK BOILER

A PLAN FOR ECONOMISING THE CONSUMPTION OF FUEL IN STEAM BOILERS.

The advantages of this boiler, an illustrated description of which was published in the MINING JOURNAL of October 3, are obvious.

It is provided with WROUGHT IRON FLUES, conveying the fire entirely over the surface of boiler below the water line, and wholly doing away with lime coming in contact with any part of the boiler, lime having been found to destroy the boiler plates before any other parts are the worse for wear. This boiler has four additional flues to the plan at present adopted, thus affording a FAR GREATER AMOUNT OF HEATING SURFACE, and MORE EFFECTUALLY CONSUMING THE GASES. Between the boilers a wrought-iron tank is fixed, extending the whole length of the boilers, for containing water for feed; this water will pass into the boiler at any temperature required. This boiler will not require anyone to enter the flues for cleansing, as the flues are provided with shifting stoppers at the ends, enabling a person to cleanse the flues even while the boiler is hot; this plan answers for any size or length boiler, and will do away with the cold water feed, which has been the cause of so many accidents. These flues are made of wrought or cast-iron. On the top of the tank a pipe will be placed, to take the waste steam that escapes and carry it to the claters. The flues for a 6 ft. boiler will be 2 ft. long, and the usual width. It must be remembered that the tank once hot will retain a hot body, with the same amount of heat that passed off before in the brick flues. I would observe that there will be no more cold water taken from these tanks than will be required for the feed, consequently no more cold water will pass into these tanks than will be necessary for feeding. It is believed this plan will SAVE TEN FEET in the LENGTH of BOILER, and it has been proved to EFFECT A SAVING of rather MORE than ONE-THIRD in the CONSUMPTION of FUEL. These boilers, with flues and tanks, can be supplied on the most reasonable terms.

NOTE.—This plan of Flues and Tank Boiler will be found very beneficial for MARINE ENGINES; the tank would receive the water from the sea, and would not only become hot for feed, but would be the means of preventing in a great measure the salt from passing into the boiler. Where great quantities of hot water are required for other purposes, these tanks will also be found very beneficial.

JOHN JEWELL.

Basset Foundry, Devon, September 30, 1863.

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